

# NOTES ON THE BLACK-FOOTED TREE RAT IN A MODIFIED ENVIRONMENT

By John Wheeler

The Black-footed Tree Rat *Mesembriomys gouldii* is a large arboreal rodent confined to tropical Australia. Its range includes Melville Island, where observations were made on the natural history of this species.

This rodent has been found to occupy 5 out of the 27 buildings at Pickertaramoor settlement, Melville Island. The ceiling space is the area found to be usually utilised, but one was living in an old 20 litre container inside a shed. It appears *M. gouldii* is using all suitable available sites at Pickertaramoor as daytime shelter spots. This is, they act as a replacement for the native-vegetation shelters (e.g. tree hollows) which would have once occurred in the settlement area, although some native trees are still found throughout the grounds.

The source of these rats would be the native vegetation surrounding Pickertaramoor. Here the dominant vegetation type is *Eucalyptus* woodland or open forest (*Eucalyptus nesophila*, *E. Miniata*, including shrubby understory,) monsoonal vine thickets, and patches of *Callitrix*. Some of these areas may still be utilised by the rats occupying the buildings for feeding, etc. It is possible that *M. gouldii* may travel some distance along the ground to feeding sites as an individual has been observed at night in a flowering *Grevillea pteridiifolia* on the edge of the treeless plains, Melville Island. In this case it is possible that this rat may have travelled about 100 m (or more) from the nearest *Eucalyptus* trees to feed on the *Grevillea* flowers.

An unspecialised diet has been suggested for this species by Watts and Aslin (1981) and it seems likely that *M. gouldii* would utilise exotic foods at the

settlement such as those provided by fruit trees and through ground foraging of food scraps. This is indicated with the following observation at Pickertaramoor.

"At 2330 hours on 26 February 1981, drawn to the attention of a gnawing noise in an African Mahogany tree (*Khaya senegalensis*) one tree rat was observed moving up and down along the tops of the limbs. The source of the noise could not be located under the available light but with the aid of a torch beam placed in the direction of the sound it was possible to locate the second tree rat. In this case, it was holding a seed with its front feet and holding onto the branch with its hind feet. Its location was near the tree trunk on the first main branch at a height of 3.3 m above ground level. This tree had a height of 7.6 m and diameter at breast height of 13.0 cm. Soon after the light beam was placed on the tree rat it dropped the seed and moved up along the branch."

The seed was collected and identified as a peach seed (*Prunus sp.*). This seed would have been collected by the rat on the ground and taken up onto the tree branch for eating. Presumably, the kernel was the desired material. This behaviour probably represents some form of security feeding strategy. Feeding in a secure location has been suggested for other rodent species (e.g. Begg and Dunlop, 1980).

Watts and Aslin (1981) claim that no social groupings have been recorded for *M. gouldii* other than mother and young. The abovementioned observation is also interesting in relation to this aspect as both rats appeared to be mature animals.

At Pickertaramoor, this tree rat in its occupation of buildings has caused damage through its chewing of timber,

plastic electrical fittings, electric wires and telephone cables. It has also caused damage to seed, particularly that of *Gronophyllum ramsayi*, stored in plastic bags at the nursery.

The Northern Brush Tail Possum (*Trichosurus arnhemensis*) has also been found to occupy a ceiling at Pickertaramoor and been observed in flowering *Grevillea* shrubs at a similar time to *M. gouldii*.

It appears that the little known *M. gouldii* is present at Pickertaramoor in sufficient numbers to make it a suitable study site. For example, Figure 1. shows this rat in a stationary stance with a straight, white tipped tail. This probably represents some sort of display, however, behaviour of this nature could only be sorted out with further observations.

#### REFERENCES

- BEGG, R.J. & (1980) Security eating, and diet in the large rock rat, *Zyromys* (Rodentia: Muridae). *AUST WILD. RES.* Vol. 7. No. 1.
- WATTS, C.H.S. (1981) *THE RODENTS OF AUSTRALIA* Angus and Robertson. Australia.

\* Conservation Commission of N.T.



Fig. 1: *M. gouldii* which on this occasion shows a prominent, straight tail.